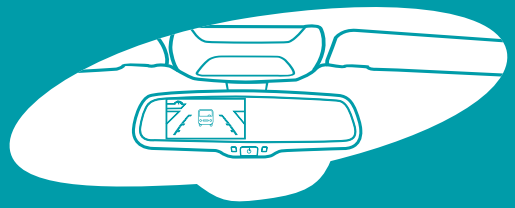

# Ultra high brightness mirror monitor

## User manual

AK-035LA / AK-043LA / BK-043LA / DK-043LA / EK-035LA / EK-043LA / HK-043LA

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# User's Manual

Welcome to use our ultra high brightness Rearview mirror monitor.

●We reserve the final explanation right on this User's Manual.

●Specifications are subject to change without notice. Sorry for any inconvenience caused!

●Please make a copy of the important data. We assume no responsibility for the data loss.

●This manual has been carefully checked. Please contact our service center when any typing mistake is found.

●Please read the operating instruction carefully and use the accessories only provided by the original factory to avoid any unexpected damage. No warranty will be executed if you are not following the instruction or connecting with the incompatible accessories, we assume no responsibility for any loss and damage caused hereby.

●Users can update and upgrade software from website at his/her option.

●Any discrepancy between the pictures with real products hereinafter, the real one prevails.



# Chapter one: Product Introduction

## 1.1 Package

The packing box contains the following accessories, please confirm:

- Rearview mirror monitor
- wire rod
- User's manual
- wire cover
- remote control(option)

For the items listed above, please confirm the actual products. If any damage, Please contact with the distributor or the agent as soon as possible.

## 1.2 Features

- Back up camera display
- Automatically brightness adjustment
- 4.0mm glass and ϕ23mm car factory OEM bracket
- Adjustable guide line (option)
- Compass and temperature (option)
- Parking sensor (option)
- Manual dimming (option)
- Auto dimming (option)

## 1.3 Specification

| Mode number | Screen Size | Display Screen | Aspect Resolution | Color Depth | Working Voltage | Video Input | Signal System |
|---|---|---|---|---|---|---|---|
| BK-043LA | 4.3” | TFT-LCD | 480(H) ×272(V) | 16 : 9 | DC 12V | VIDEO-IN to GPS /DVD (default) CAMERA to backup camera. | PAL/ AUTO/ NSTC |
| DK-043LA | 4.3” | TFT-LCD | 480(H) ×272(V) | 16 : 9 | DC 12V | VIDEO-IN to GPS /DVD (default) CAMERA to backup camera. | PAL/ AUTO/ NSTC |
| AK/EK-035LA | 3.5” | TFT-LCD | 320(H) ×240(V) | 4: 3 | DC 12V | VIDEO-IN to GPS /DVD (default) CAMERA to backup camera. | PAL/ AUTO/ NSTC |
| AK/EK-043LA | 4.3” | TFT-LCD | 480(H) ×272(V) | 16 : 9 | DC 12V | VIDEO-IN to GPS /DVD (default) CAMERA to backup camera. | PAL/ AUTO/ NSTC |

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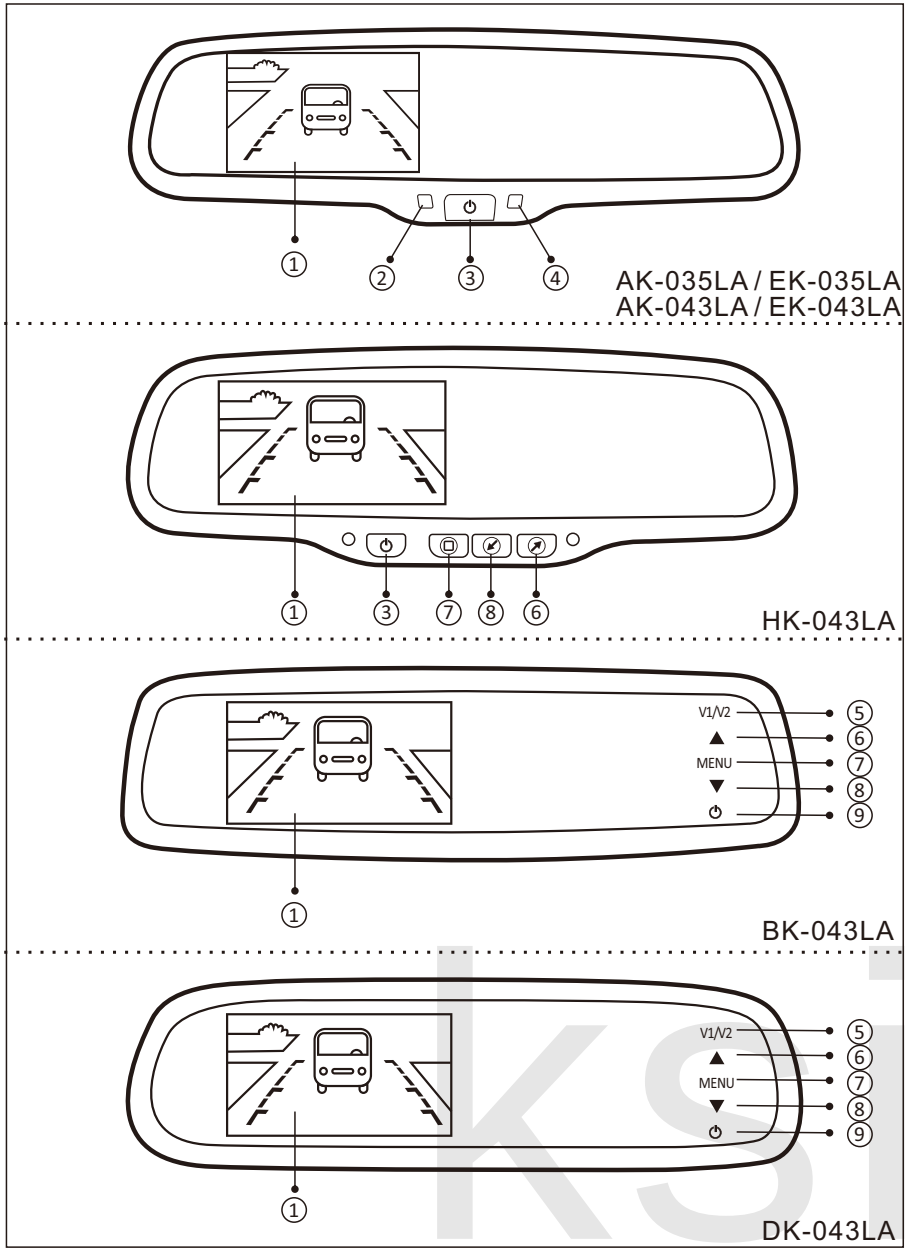
# Chapter two: Installation and wire

## 2.1 Keyboard




| No. | Descrition |
|---|---|
| 1 | 3.5/4.3 ultra high brightness display screen |
| 2 | Light sensor |
| 3 | Mirror without auto-dimming function:<br>video input: turn on/off the screen<br>camera input: adjust the brightness of the screen image<br><br>Mirror with auto-dimming function:<br>Video input: short press to turn on/off auto-dimming<br>long press to turn on/off the screen.<br>camera input: adjust brightness of the screen image |
| 4 | Mirror without auto-dimming function: When the screen turns off or doesn't have video signal, the indicator light will light up, conversely, it turns off .<br>Mirror with auto-dimming function: when the auto-dimming activates, the indicator light will become light; conversely, it will turn off. |
| 5 | The V1/V2 button can switch the 2 video signal input, Press it can switch back and forth between the two video signals. |
| 6 | Up |
| 7 | 1.Press the menu, which can adjust the brightness, contrast, color saturation of the screen. All the default parameters is 50, you can adjust the parameters through the up and down buttons according to your preference.<br>2.Continue to press the MENU button, it can set the ANGLE(Every country has a specific number), CALIBRATION(AUTO/OFF), TEMP UNIT (°C/°F), SCALE(ON/OFF: it can use remote control to adjust), LANGUAGE(You can choose the language what you need: English, Spanish, Portuguese, Italian, French, German, Dutch, etc.)<br>3.Select the “RESET” and press UP/DOWN can back to factory default settings. |
| 8 | Down |
| 9 | Turn on/off the screen |

**The menu tabs will automatically be hidden in 10seconds and lighted up again as soon as you press the touch buttons**

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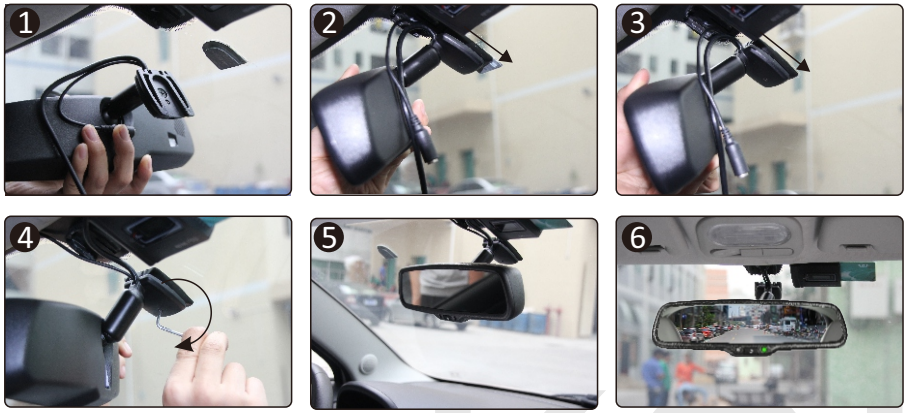
## 2.2 How to install high brightness mirror monitor

### 2.2.1 Remove the original mirror

Different cars have different brackets. It depends on your vehicle maker and manufacturer.
There are many methods to remove the original rear-view mirror, however ,please don't force the mirror off the bracket.
The manufacturer will not be responsible for damage caused to your vehicle as a result of installation of this mirror monitor.

### 2.2.2 Install high brightness mirror monitor on the base



We have many kinds of brackets. one of them must suit for your car, and we are not going to go through anymore examples, because the space is limited.
If you don't find the same  bracket here as your car, please contact us.

Rearview mirror monitor

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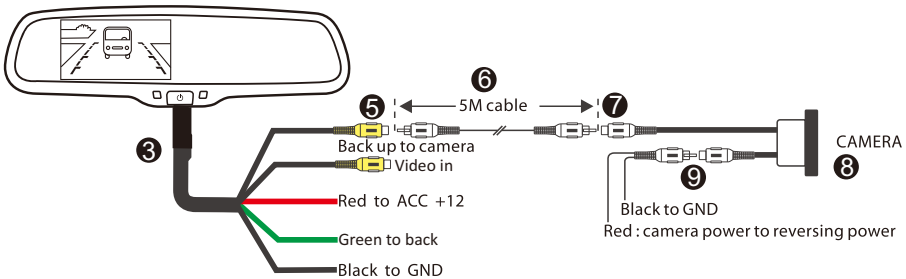
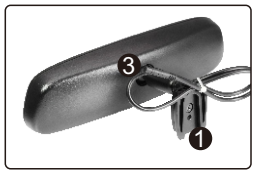
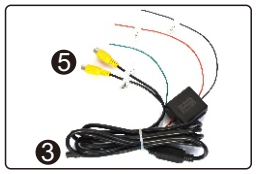
## 2.5 How to wire

After the mirror is mounted, you need to run the cable along the roof lining and down the pillar so you can connect to Power and the rear view camera



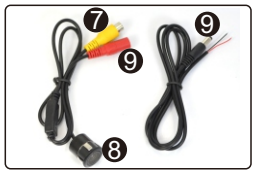



rearview mirror monitor

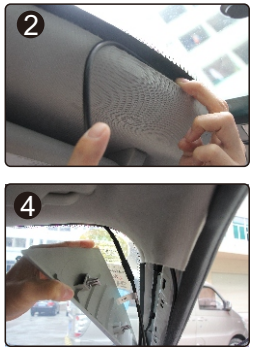


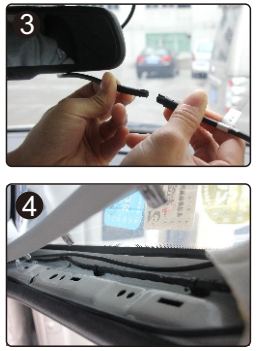

mirror monitor cable

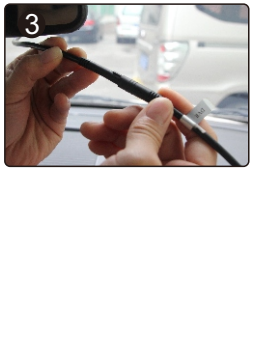
Car camera extension cable




camera (not included)



# Chapter Three: Basic functions

## 3.1 High reflectance mirror

Clear back up view displayed on high-reflectance mirror.

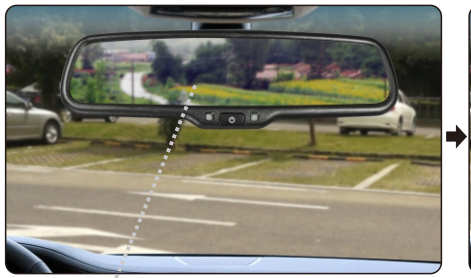
high-reflectance mirror

normal-reflectance mirror

## 3.2 Back up camera dispaly

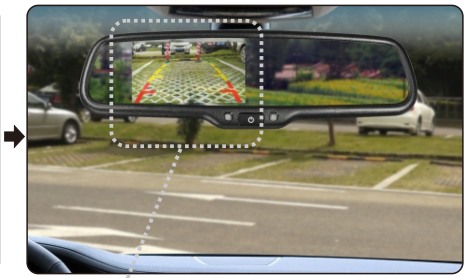
When the car is in reverse, the monitor will automatically display backup camera.

not in reverse



A perfect reflection monitor

in reverse



automatically display

## 3.3 The brightness of screen automatically adjusts

The brightness of screen varies with ambient light, thereby, to make driver get a clear and comfortable image when reversing.



Weak light

Strong light

Top grede Mirror

Weak light

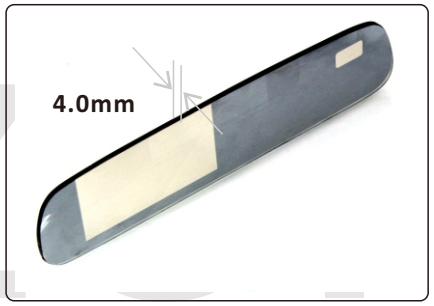
Strong light

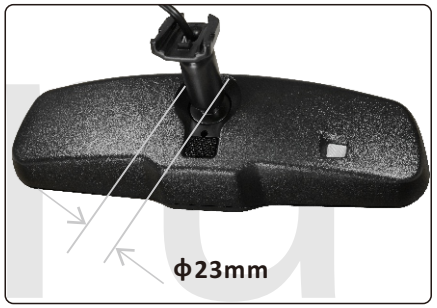
Budget grade Mirrors

## 3.4 Glass and bracket

The thickness of our mirror's glass is 4mm. It is strong enough to bear impact and reach every country's safety standards on rearview mirror

OEM bracket for special rearview mirror monitor with 23mm-thickness pipe.



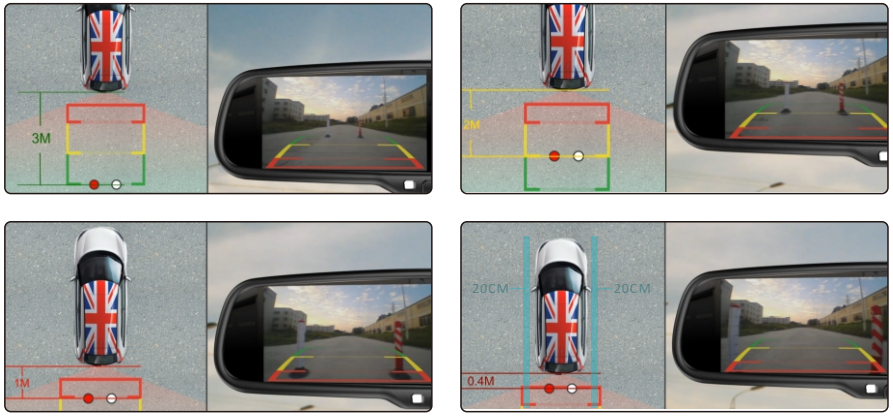



# Chapter Four: Optional functions

## 4.1 Adjustable guide line

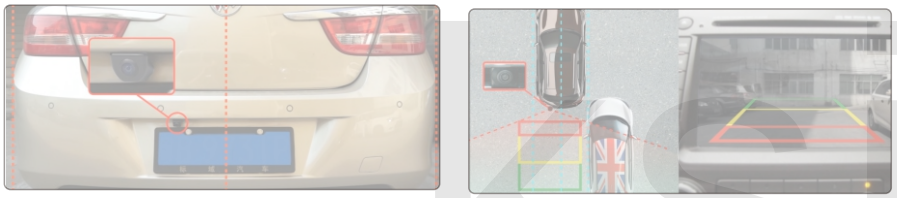
### 4.1.1 About guide line

Generally, to help drivers estimate the distance from obstacles, there are three lines for reference -red, yellow and green. Those three lines are displayed on the monitor when car is reversing. The green line is 3m from the back of car and the yellow line is 2m. The distant red line is 1m from the backside of car while the closed red line is 0.4m. Both reference lines on the left and right should leave 0.2m space from the car.




### 4.1.2 What the regular guide line is

Regular guide line is fixed. But installation sites of cameras are different as well as car size. The fixed guide line is not accurate enough for drivers. There will be a great difference between regular and fixed guide lines and car's real guide lines, especially when camera is mounted on the left or right side of car backside. It may cause accidents.

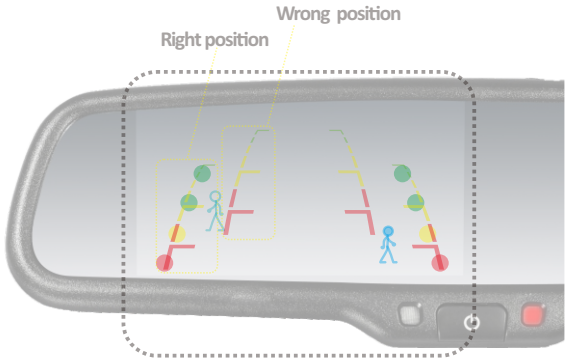




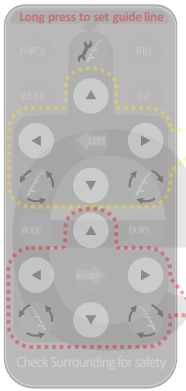
### 4.1.3 How to adjust the guide line

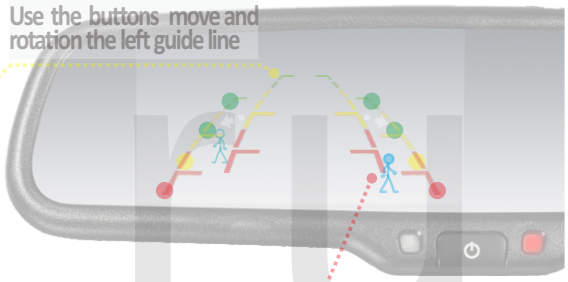
According to the site of standard reference line, we can put reference objects such as desks in the back area of car. Compared with the marked reference objects, we can adjust the sites and angle of two guide lines displayed on the monitor. You will get the accurate and safety guide lines once they coincide with the reference objects.

Long press setting button is to enter into “guide line adjustment” mode. The upper half of the remote is to adjust left guide line while the bottom half of the remote is to adjust the right one. The up, down, left and right buttons are to adjust the location of guide lines. The clockwise rotation contra rotation buttons are to adjust the angle of guide lines. It is easy to operate and calibrate.




Display on the monitor



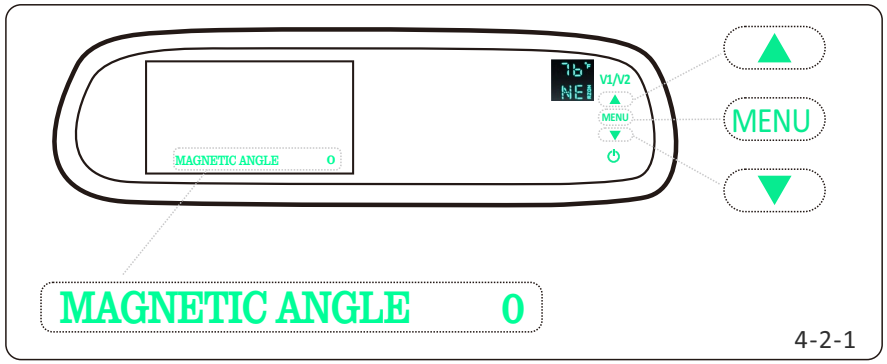



## 4.2 Compass

### 4.2.1 Digital Compass Calibration(BK-043LA / DK-043LA)

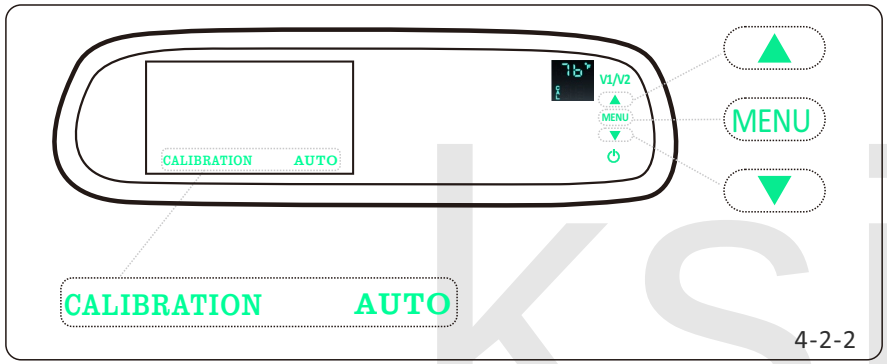
This compass can be calibrated by driving your vehicle in several complete circles. A quick guide is stated as below. If the vehicle's compass headings become inaccurate, the compass can be manually calibrated by:

1.Press the MENU enter into “MAGNETIC ANGLE”, and press ▲ ▼ button to choose the appropriate magnetic declination4-2-1.
(Using the map 4-2 in the page18 to find your geographic location, note the zone that you are located)




4-2-1

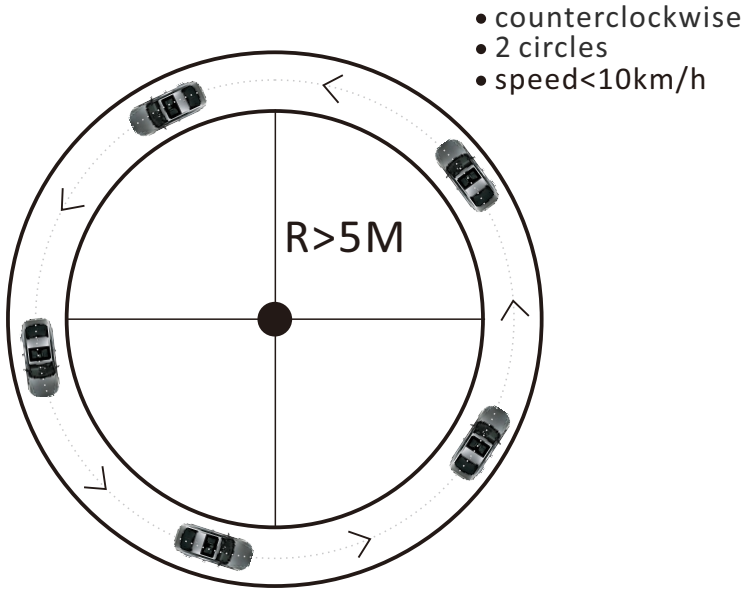
2. Press MENU enter into the “CALIBRATION”, the default mode is “OFF”, press ▲ ▼, select the “AUTO” 4-2-2




4-2-2

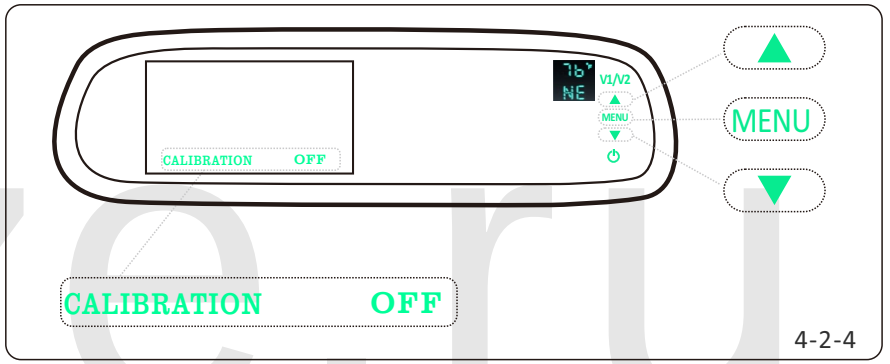
3. Drive your vehicle in at least 2 circles' counterclockwise, allowing 45 seconds to complete one circle

4. For best calibration, keep your circle radius close to 5 meters and speed less than 10km/h.4-2-3




4-2-3

5. Press MENU enter into the “CALIBRATION”, press ▲ ▼, select the “OFF” 4-2-4




4-2-4

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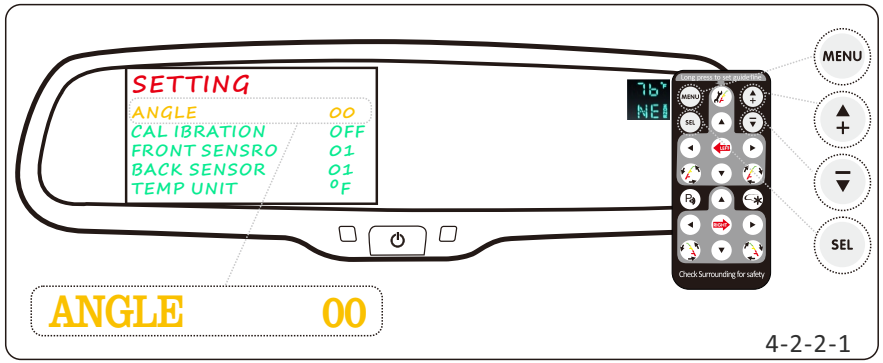
## 4.2 Compass

### 4.2.2 Digital Compass Calibration(AK-035LA AK-043LA EK-035LA EK-043LA)

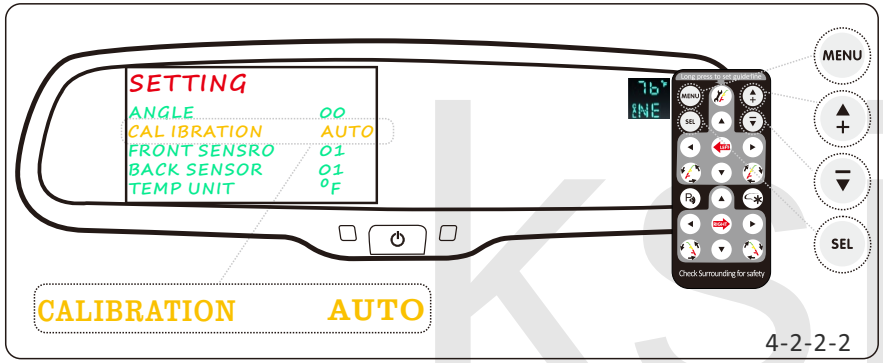
This compass can be calibrated by driving your vehicle in several complete circles. A quick guide is stated as below. If the vehicle's compass headings become inaccurate, the compass can be manually calibrated by:

1.Press the MENU three times enter into “SETTING” menu, and press SEL button to choose the “ANGLE”. you can press + − to adjust the angle. 4-2-2-1 (Using the map 4-2 in the page18 ) to find your geographic location, note the zone that you are located)




4-2-2-1

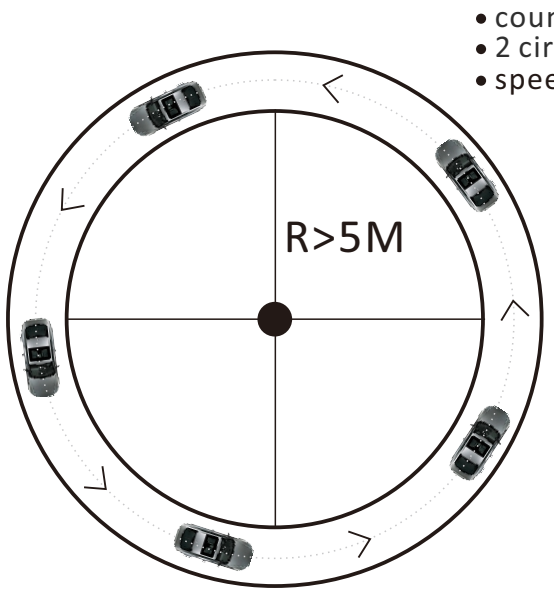
2. Press SEL to select the “CALIBRATION”, the default mode is “OFF”, press + − , select the “AUTO” 4-2-2-2




4-2-2-2

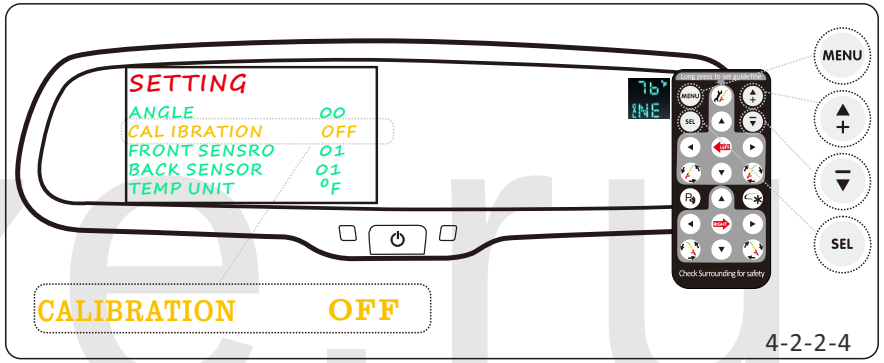
3. Drive your vehicle in at least 2 circles' counterclockwise, allowing 45 seconds to complete one circle

4. For best calibration, keep your circle radius close to 5 meters and speed less than 10km/h.4-2-2-3




4-2-2-3

5. Press SEL to select the “CALIBRATION”, press + − , select the “OFF” 4-2-2-4




4-2-2-4

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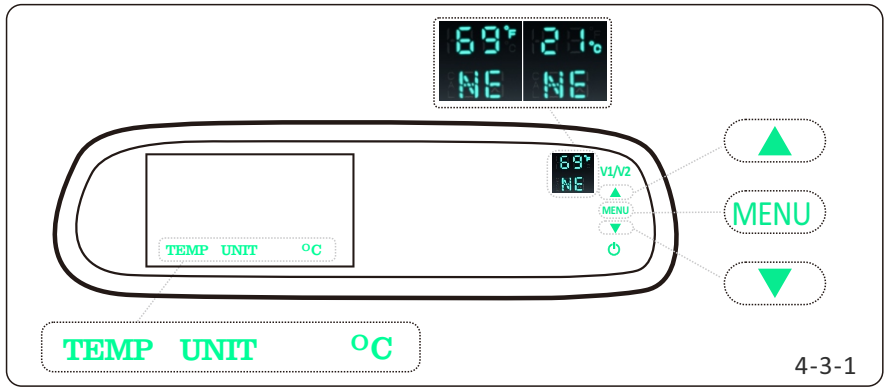
## 4.3 Temperature

### 4.3.1 How to set (BK / DK SERIALS)

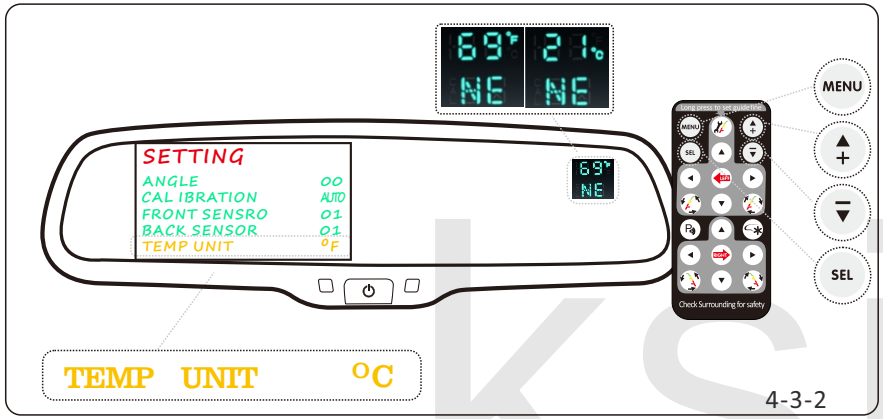
Press the MENU enter into “TEMP UNIT”, press ▲ ▼ , you can switch °F to °C 4-3-1




4-3-1

### 4.3.2 How to set (AK / EK SERIALS)

1.Press the MENU enter into “SETTING”menu, and press SEL button to choose the “TEMP UNIT”.press ▲ ▼ you can switch °F to °C 4-3-2



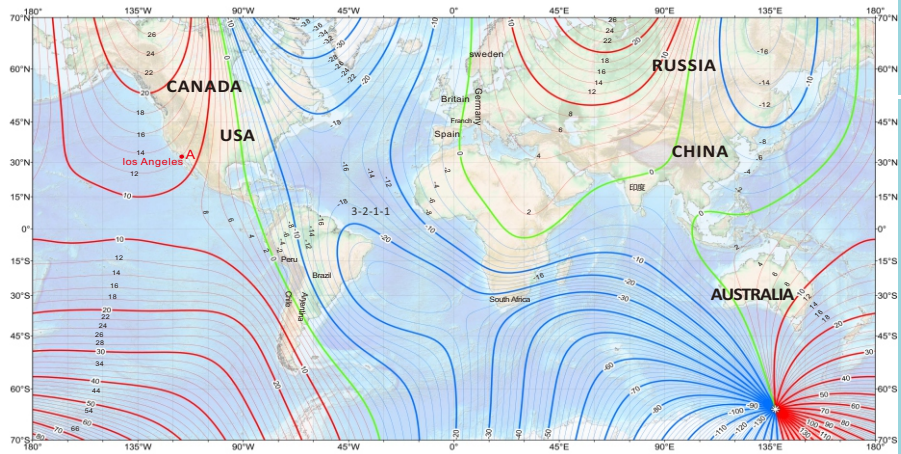

4-3-2

### 4.3.3 Temperature sensor installation

Locate the temperature sensor between the front of the radiator and the front bumper

Locate edge of sheet metal or plastic shield, and slide metal clip over edge until secure.

Sensor should be in the flowing of fresh air. Do not locate it next to a heated engine part.




4-2

| | | |
|---|---|---|
| New York: -13 | BeiJing: -7 | Moscow: 10 |
| Ottawa:-15 | New Delhi:1 | Capetown: 16 |
| Los angeles: 4 | DuBai:2 | Berlin: 4 |
| Sao Paulo:-20 | Paris:0 | Canberra: 12 |

**We do not recommend to use compass in the area where the magnetic lines of flux is intensive. For example, the north of Canada.**

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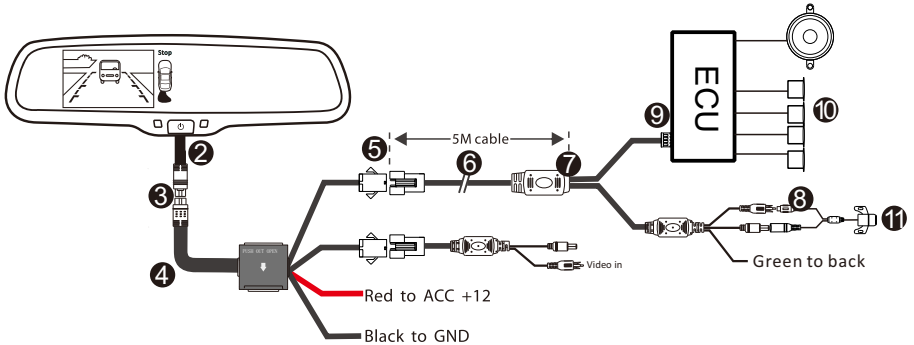
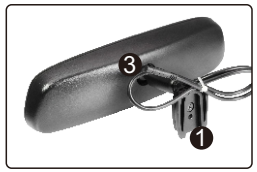
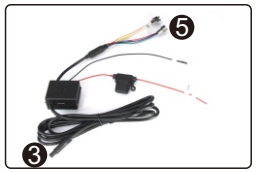
## 4.4 Parking sensor

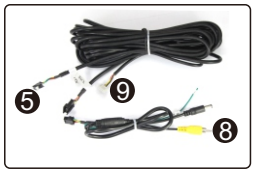
### 4.4.1 How to wire

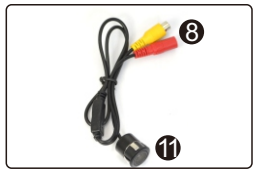


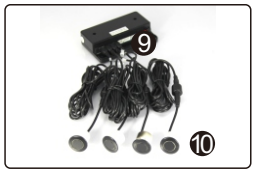

| | |
|---|---|
| Power button | Mirror without auto-dimming function:<br>Video input: turn on/off the screen<br>Camera input: short press adjust the brightness of the screen image<br>long press to turn on/off the voice Bi...<br><br>Mirror with auto-dimming function:<br>Video input: short press to turn on/off auto-dimming<br>long press to turn on/off the screen.<br>Camera input: short press adjust the brightness of the screen image<br>long press to turn on/off the voice Bi... |


rearview mirror monitor


mirror monitor cable

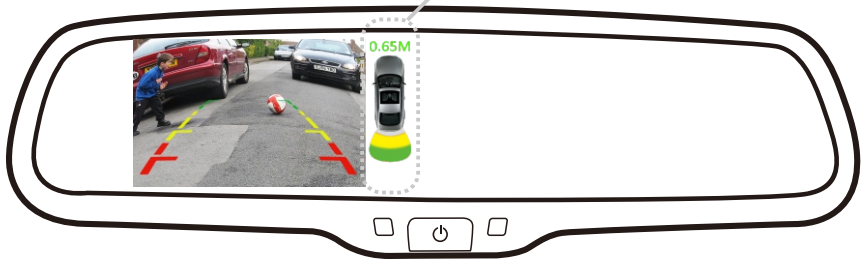

extension cable


camera

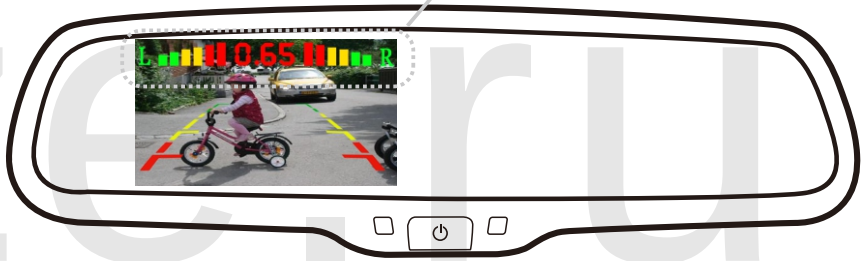

parking sensor

### 4.4.2 Two display styles

**Top view display style**




**LMR display style**

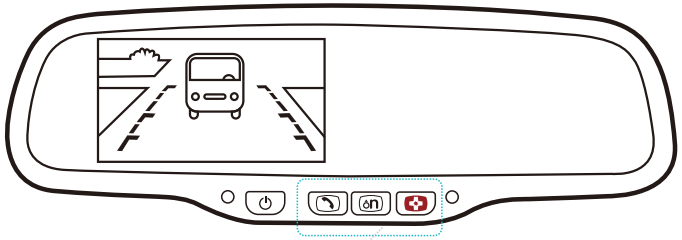



zeeru

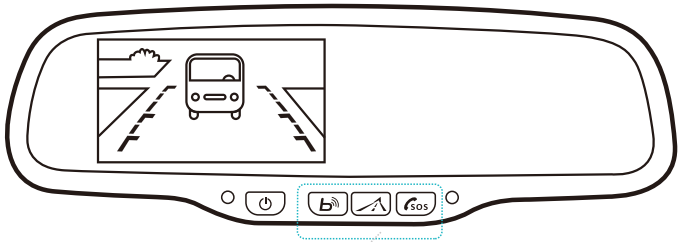
## 4.5 Special for GM Onstar system and HYUNDAI Bluelink system

### 4.5.1 The buttons

**Note: Onstar system and Bluelink system are the patent and trade mark from GM and HYUNDAI car factories respectively.**

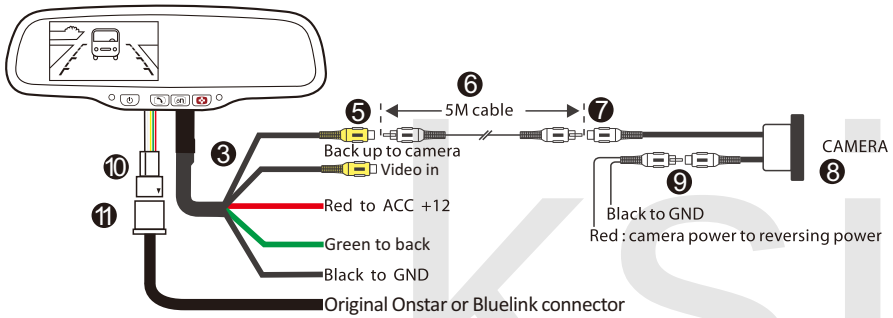


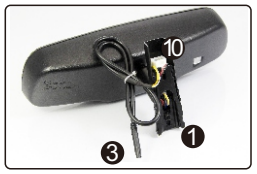
**Special for GM On Star system**



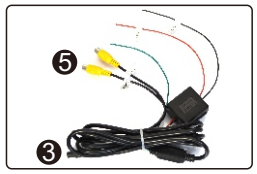
**Special for HYUNDAI Blue link system**

### 4.5.1 How to wire



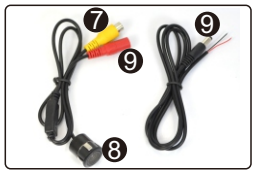




rearview mirror monitor

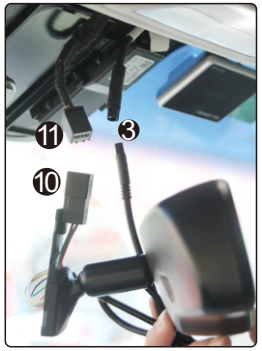


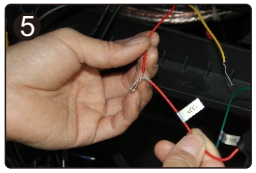

mirror monitor cable

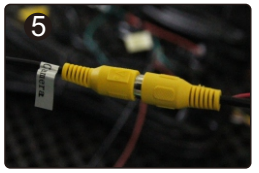
car camera extension cable

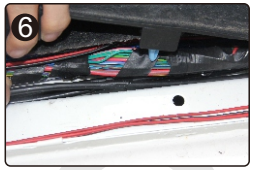


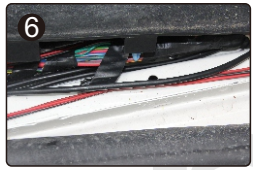

camera (not included)

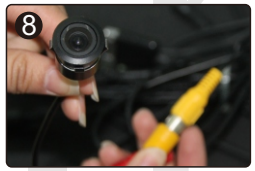






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## 4.6 Dimming Functions

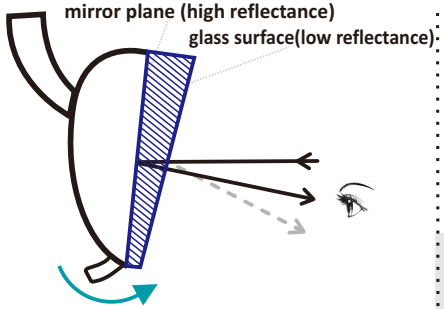
### 4.6.1 Why need dimming function

- To protect drivers from night glare of headlight.
- It is a function that can improve the car safety level.
- It may cause a series of legal disputes once removed by car dealers or sellers

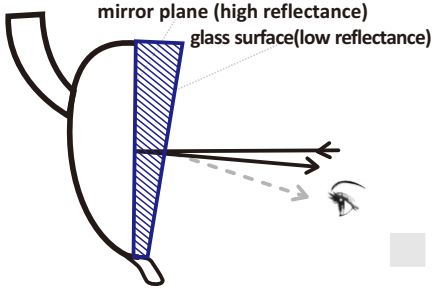
### 4.6.2 manual dimming

The interior rearview mirror will reflect the glare of rearward-approaching vehicles and it shines to driver's eyes when driving at night, which would cause a serious crisis. While the manual dimming rearview mirror comes with special glass and rotating device, when the strong light comes from the back of the car, the driver only needs to rotate it to another angle, that is, strong light will be reflect to another area which ensures the safe driving at night.

**the reflectance of glass surface is much lower than mirror plane**



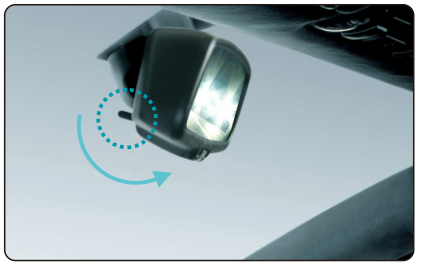

when driving car at daytime. the image from the backside car is the reflect image of the mirror , which is the same principle of cosmetic mirror.



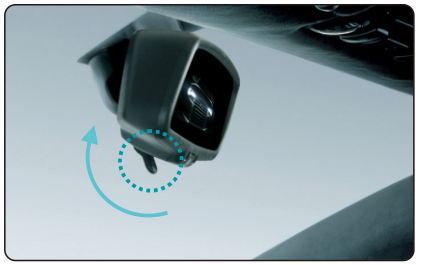

when driving at night, there is strong light from rearward-approaching vehicles, the driver can rotate the manual shank to another angle, that is, strong light will be reflected to another area . At this moment, the image from backside car is the reflectance of glass surface.



manual-dimming bleaching state

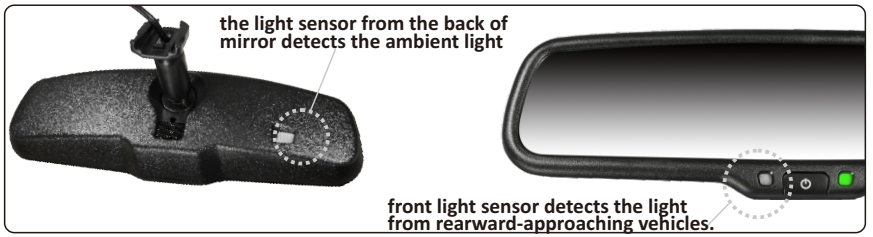


manual-dimming working state



### 4.6.3 Auto dimming

The auto-dimming of our mirror works automatically when you start the engine, then the indicator light also lights. The light sensor in the back of the rearview mirror will always detect the ambient light. The auto-dimming doesn't work in the broad day for the adequate daylight. However, when night falls and the ambient light is below 5lux, the auto-dimming starts to work and automatically dims to eliminate the glare of rearward-approaching vehicles. Furthermore, the degree of brightness of the auto-dimming glass depends on the level of the light. The stronger the light from the back of the car is, the darker the glass is. Hence it protects drivers from becoming dizzy and avoiding car accident.


the light sensor from the back of mirror detects the ambient light
front light sensor detects the light from rearward-approaching vehicles.

Auto-dimming bleaching state

Auto-dimming working state

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